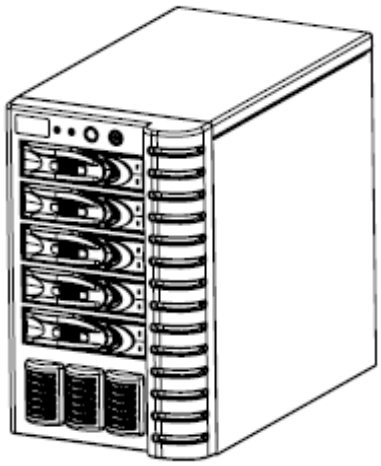
5 Bay SAS/SATA II HDD JBOD

XJ-SA12-005



USER'S MANUAL

Document number: MAN-00079-C

P/N: H88TJ53660-AP010-0

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SAFETY PRECAUTIONS

Before getting started, please read the following important cautions:

- All cautions and warnings on the equipment or in the manuals should be noted.
- Most electronic components are sensitive to electrical static discharge. Therefore, be sure to ground yourself at all times when installing the internal components. Use a grounding wrist strap and place all electronic components in static-shielded devices. Grounding wrist straps can be purchased in many electronic supply stores.
- Do not open the top cover of the system. If opening the cover for maintenance is a must, only a trained technician should do so. Integrated circuits on computer boards are sensitive to static electricity. Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
- Place this equipment on a reliable surface when install. A drop or fall could cause injury.
- Please keep this equipment away from humidity.
- Do not leave this equipment in an environment unconditioned, out of operation or storage temperature range may damage the equipment.
- Never pour any liquid into ventilation openings, this could cause fire or electrical shock.
- Make sure the voltage of the power source is within the specification on the label when connecting the equipment to the power outlet. The current load and output power of loads shall be within the specification.
- This equipment must be connected to reliable grounding before using.
- Place the power cord out of the way of foot traffic. Do not place anything over the power cord. The power cord must be rated for the product, voltage and current marked on the product's electrical rating label. The voltage and current rating of power cord should be greater than the voltage and current rating marked on the product.
- If the equipment is not used for a long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
- Never open the equipment. For safety concerns, only qualified service personnel should open the equipment for maintenance.
- If one of the following situations arise, the equipment should be checked by service personnel:
  - ✓ The power cord or plug is damaged.
  - ✓ Liquid has penetrated the equipment.
  - ✓ The equipment has been exposed to moisture.
  - ✓ The equipment does not work well or will not work according to its user manual.

- ✓ The equipment has been dropped and/or damaged.
- ✓ The equipment has obvious signs of breakage.
- ✓ Please disconnect this equipment from the AC outlet before cleaning. Do not use liquid or detergent for cleaning. The use of a moisture sheet or cloth is recommended for cleaning.

Note: Product features and specifications are subject to change without notice.

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CHAPTER 1 INTRODUCTION

1.1 Key features

- ✓ miniSAS wide port supports 1200MB/s high speed transmission
- ✓ miniSAS wide port supports JBOD expansion
- ✓ Supports hot-swappable 3.5” SAS and/or SATA II drives
- ✓ Supports SES2 (SCSI Enclosure Services – 2) and SAF-TE (SCSI Accessed Fault Tolerant Enclosures) for In-Band Enclosure management.
- ✓ Intelligent firmware design without complicated setting
- ✓ RS232 Support Console for firmware update and status check
- ✓ Audible alarm and LEDs indicators for FAN failure or Over temperature

1.2 Checking list

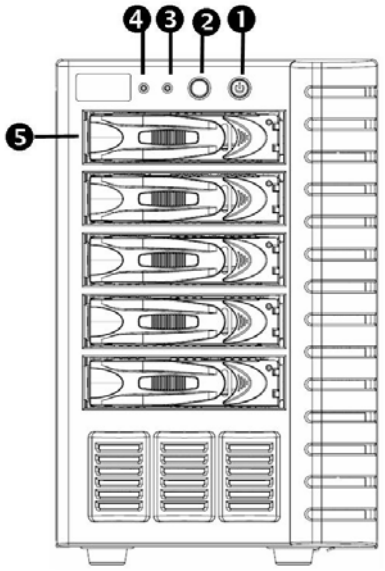
Before removing the subsystem from the shipping carton, visually inspect the physical condition of the shipping carton. Exterior damage to the shipping carton may indicate that the contents of the carton are damaged. If any damage is found, do not remove the components；contact to the dealer where the subsystem was purchased for further instructions. Before continuing, first unpack the subsystem and verify that the contents of the shipping carton are all there and in good condition.

The package contains the following items：

- ■ One set JBOD with 5 units HDD tray (Shipping without drives installed)
- ■ 3.5” HDD tray screw bag x1 (20 pieces flathead screw are included)
- ■ Power cord x1 (type based on different territories.)
- ■ Installation CD-Rom x1
- ■ User Manual x1

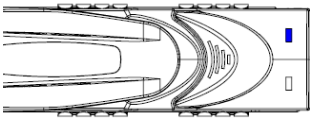
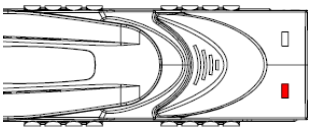
Note：Inspect the shipping cartons for evidence of physical damage. If a shipping carton appears damaged, request that the carrier’s agent be present when the carton is opened. Keep all contents and packing materials for the agent’s inspection.

1.3 Front Panel Features

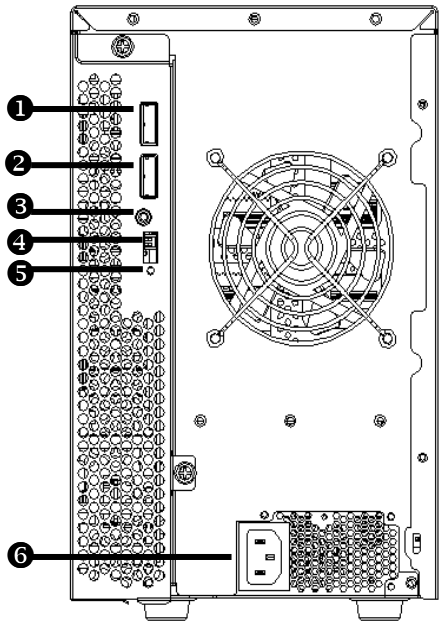


❶Power on/off LED button	Power on/off system
❷Mute Button	When Buzzer is enabled and triggered, push Mute button to turn off
❸Over Temperature LED	LED indicate the system exceeds the threshold temperature
❹Fan Fail LED	LED indicate the fan fail
❺HDD tray	Screw the HDD into drive tray

LED indicators

LED NAME	Color definition	Behavior
	Fan fail LED： Red	On, when system detects fan abnormality Off, normal
	Over Temp： RED	On, when system temperature exceeds the threshold temperature
	Power： GREEN	On：When system is powered on (Combine with power button)
	HDD Activity： BLUE	On, when HDD is connected. Flash, when accessing HDD Off, when system does not detect the HDD.
	HDD Fail： RED	Normally this LED is controlled by Host RAID card or HBA. It is ON to indicate HDD failure, Rebuild or Locating, but varies from different HBAs

1.4 Rear Panel Features



❶Host	miniSAS 4x connector for HBA or RAID adapter
❷Expansion	miniSAS 4x connector for JBOD expansion
❸RS-232 Phone Jack	Connect to host COM port. Console can be used for firmware upgrade, and detail status monitor if necessary
❹Factory reserved switch	1：Reserve 2：Buzzer Enable — OFF/Disable；ON/Enable (default)
❺Heart Beat LED	Heart Beat indicator
❻Power AC inlet	Connect a power cord to the AC inlet for power supply

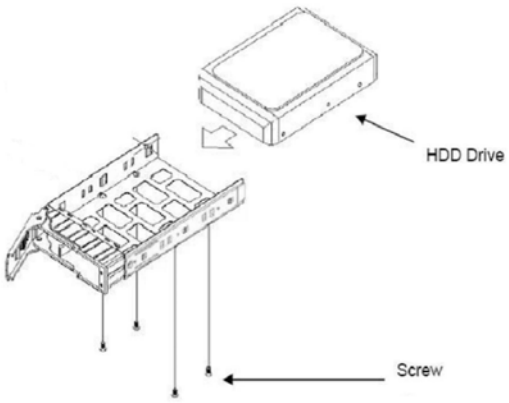
CHAPTER 2 INSTALLATION OVERVIEW

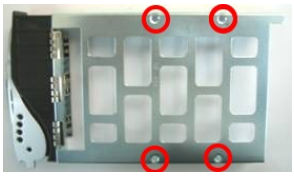
> **Warning**：Before removing or install the unit, be sure that the unit is not turned on or connected to the AC power.

2.1 How to install and remove HDD Trays?

1. Press the latch to the right side by the thumb.
2. Push the tray door outward by the forefinger at the same time.

3. Pull the HDD tray from the bay gently.
4. Secure the HDD to the tray by using four mounting screws shown as below.





Rear view of HDD tray

5. Slide the HDD tray into drive slot until the handle is locked.

6. Repeat step 1 to 5 for all remaining HDD trays.

2.2 How to replace the fan?

1. Lay down the “5 bay tower” on the flat surface, right side on the top.
2. Release the 2 thumbscrews by following the direction shown as below.

3. Push the cover in the direction shown as below photo.

4. Unplug the LED cable from LED board before removing the cover.

5. Unscrew the four screws and remove the fan guard at rear side.

6. Take out the fan from the enclosure and install a new one.
7. Fasten the four screws and fan guard again.
8. Plug the fan cable in the slot.

9. Plug the LED cable pin on the LED board before closing the cover.

2.3 Powering on the device

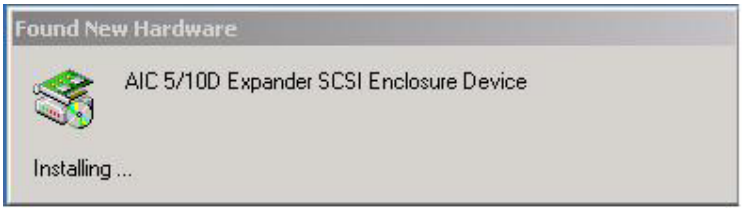
After HDD installation is complete, the device can be turned on. Please check the following items：

1. Ensure that the cables are connected.
2. Plug in corresponding power cord to AC main set.
3. Press the ON/OFF switch on the front panel, then the system will boot.

CHAPTER 3 FIRMWARE UPGRADES

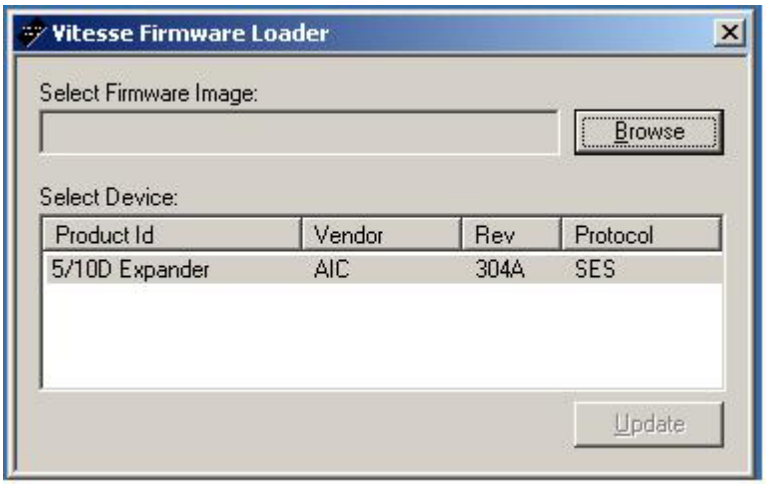
3.1 In-band Firmware Upgrade

1. Boot up the PC after the SAS HBA Adapter is installed.
2. Windows will detect new device.

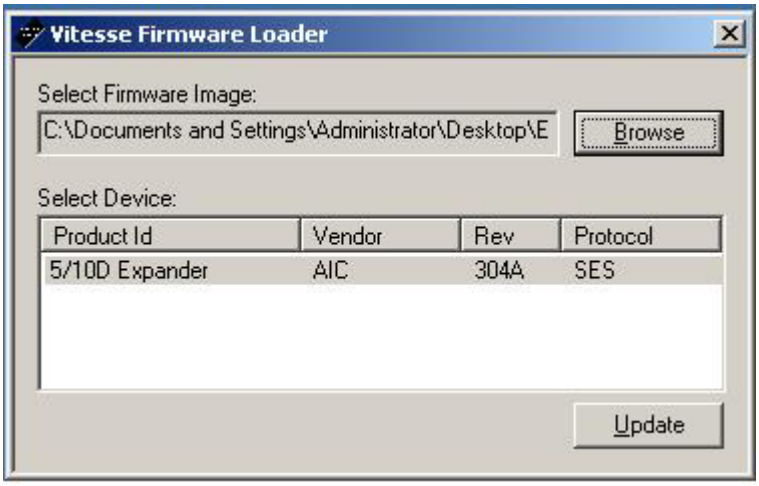


3. Run the file **fwloadfuf.exe**, it will detect SAS device automatically.

4. When the application detects the SAS device, the Firmware Loader window will display.



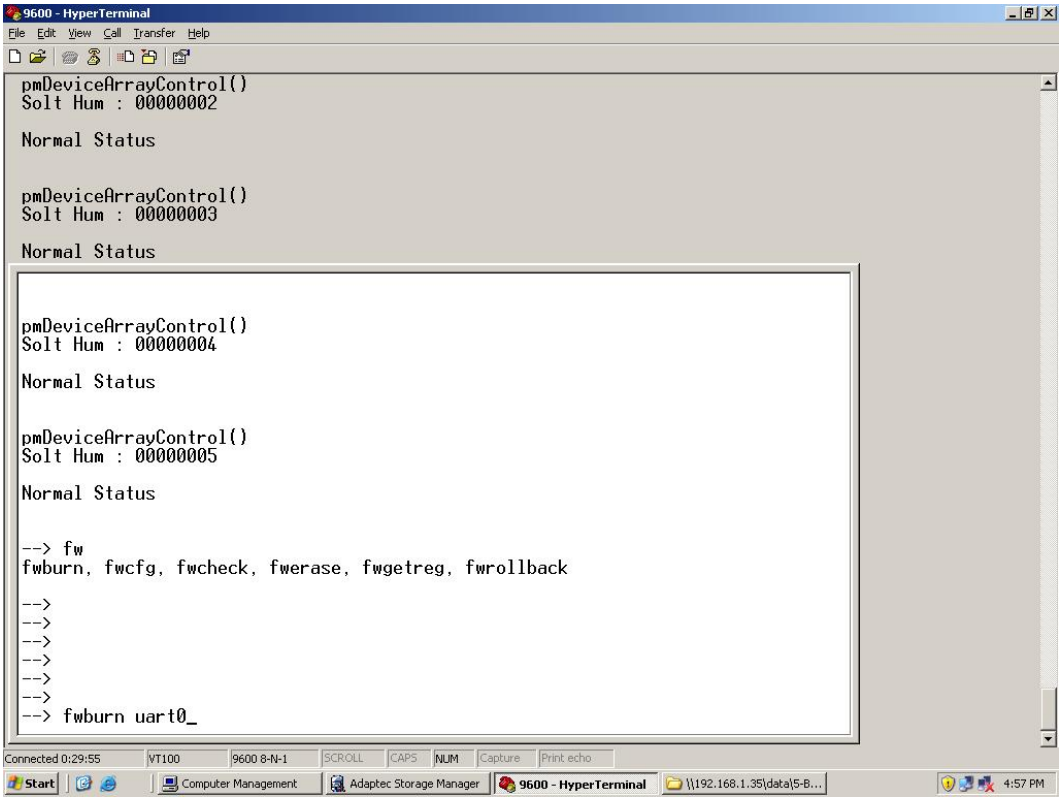
5. Click Browse to select the firmware (*fuf file), then press Update to start firmware upgrading.



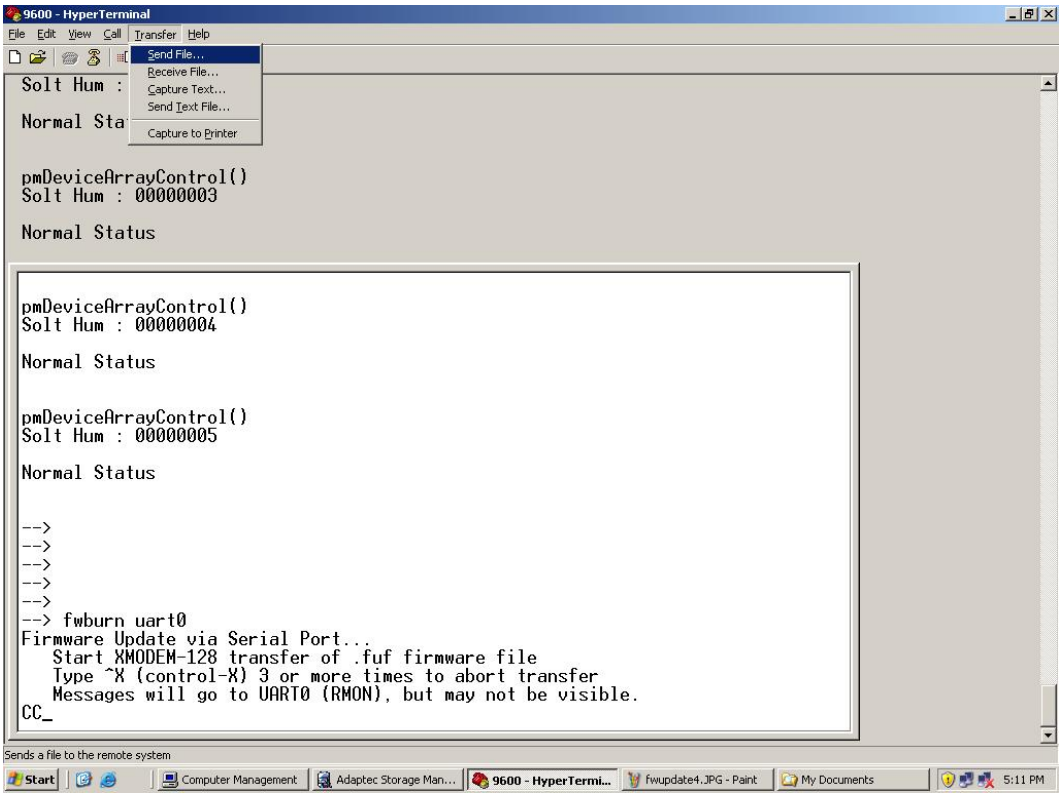
6. The firmware upgrade will be completed in 2 minutes, then the firmware Loader window will display again.
7. SAS JBOD will restart automatically.
8. To restart the host PC to continue further operation.

3.2 Out-of-band Firmware Upgrade

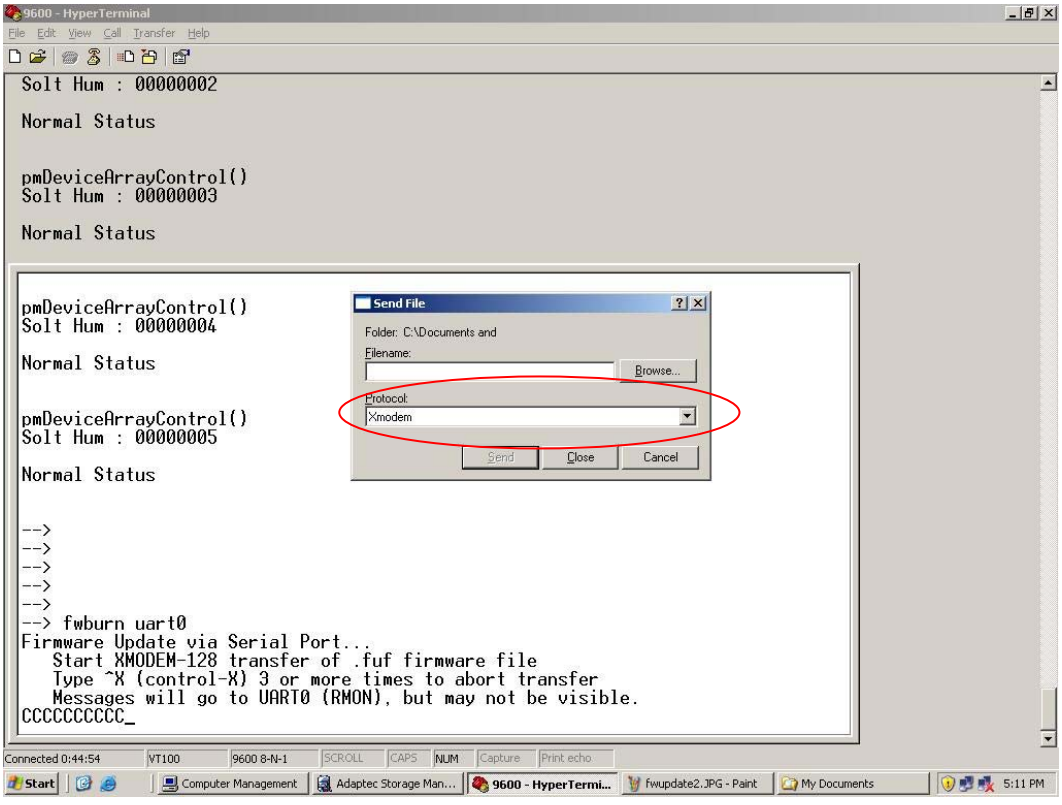
1. At HyperTerminal, type **fwburn uart0** and press Enter.



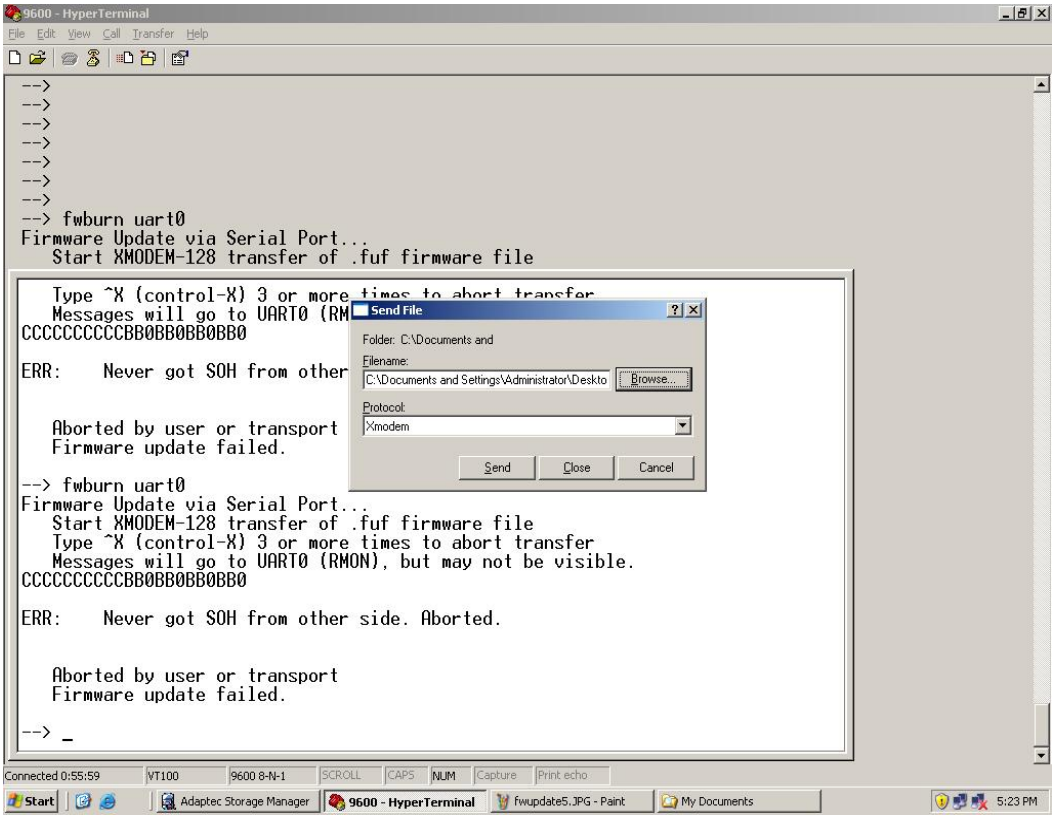
2. Select Transfer and click Send File.

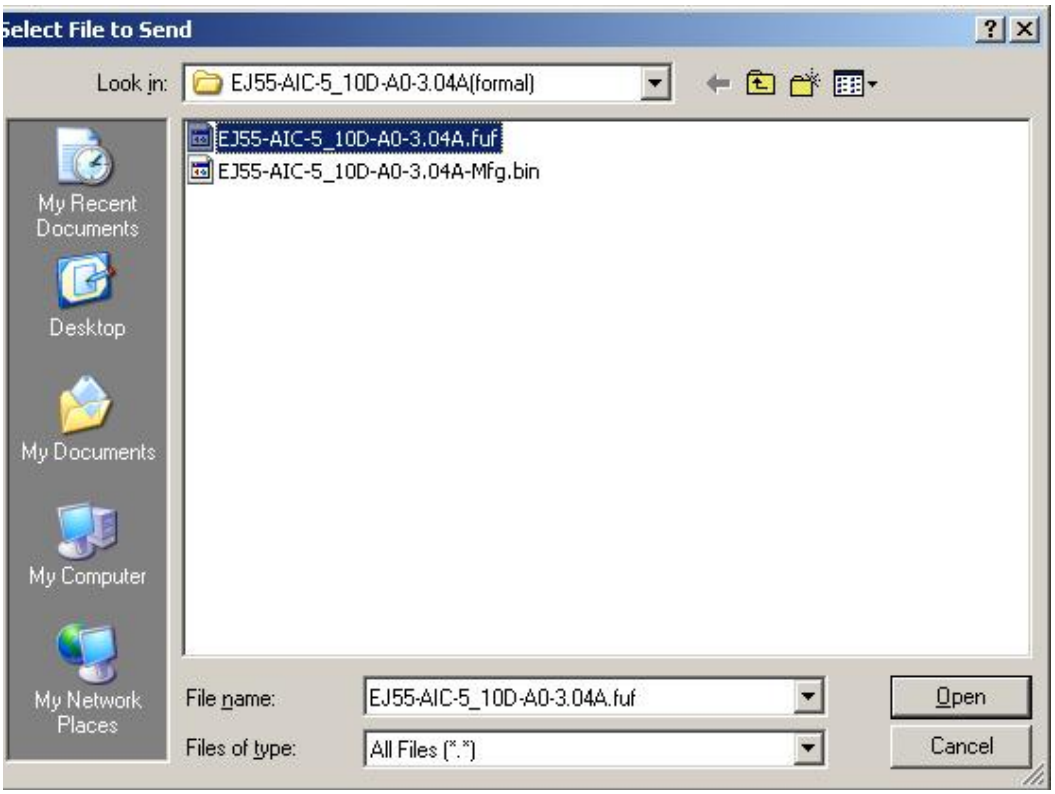


3. At Send File window, select **Xmodem** in Protecol column.

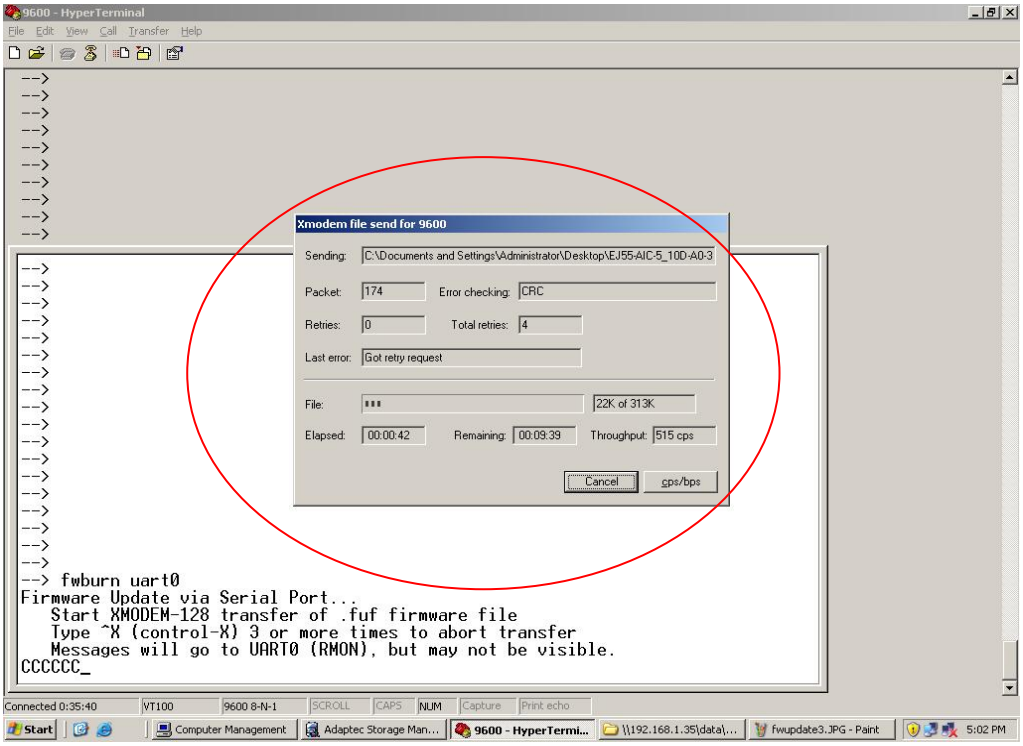


4. Click Browse and select the firmware file to upgrade (*fuf file), then press Send.



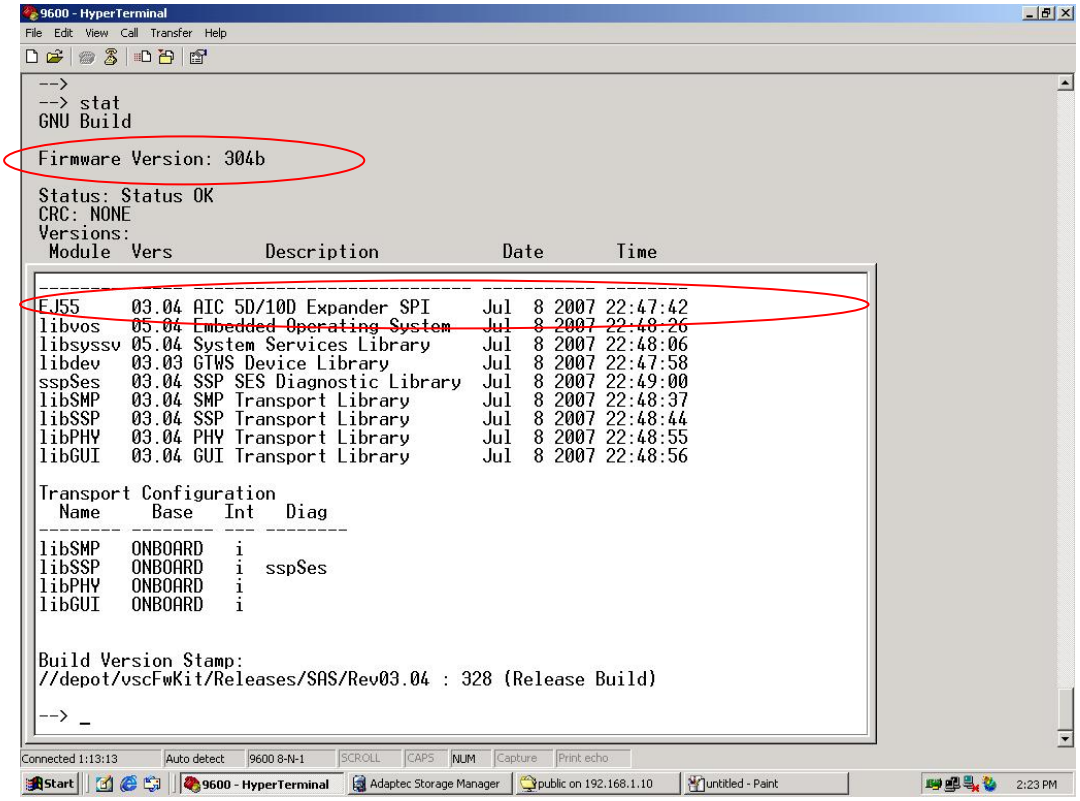


5. The Xmodem file send for 9600 window will show the firmware upgrade status.


9600 - HyperTerminal
File Edit View Call Transfer Help
Xmodem file send for 9600
Sending: C:\Documents and Settings\Administrator\Desktop\EJ55-AIC-5_10D-A0-3
Packet: 174 Error checking: CRC
Retries: 0 Total retries: 4
Last error: Got retry request
File: 22K of 313K
Elapsed: 00:00:42 Remaining: 00:09:39 Throughput: 515 cps
Cancel cps/bps
--> fwburn uart0
Firmware Update via Serial Port...
Start XMODEM-128 transfer of .fuf firmware file
Type ^X (control-X) 3 or more times to abort transfer
Messages will go to UART0 (RMON), but may not be visible.
CCCCCC_
Connected 0:35:40 VT100 9600 8-N-1 SCROLL CAPS NUM Capture Print echo
Start Computer Management Adaptec Storage Man... 9600 - HyperTermi... \\192.168.1.35\data\... fwupdate3.JPG - Paint 5:02 PM

6. SAS JOB will restart automatically when firmware upgrade is completed.

7. Enter Hyper Terminal again to ensure that the latest version firmware has been updated by checking the Firmware Version.


9600 - HyperTerminal
File Edit View Call Transfer Help
--> stat
GNU Build
Firmware Version: 304b
Status: Status OK
CRC: NONE
Versions:
Module Vers Description Date Time
EJ55 03.04 AIC 5D/10D Expander SPI Jul 8 2007 22:47:42
libvos 05.04 Embedded Operating System Jul 8 2007 22:48:26
libsyssv 05.04 System Services Library Jul 8 2007 22:48:06
libdev 03.03 GTWS Device Library Jul 8 2007 22:47:58
sspSes 03.04 SSP SES Diagnostic Library Jul 8 2007 22:49:00
libSMP 03.04 SMP Transport Library Jul 8 2007 22:48:37
libSSP 03.04 SSP Transport Library Jul 8 2007 22:48:44
libPHY 03.04 PHY Transport Library Jul 8 2007 22:48:55
libGUI 03.04 GUI Transport Library Jul 8 2007 22:48:56
Transport Configuration
Name Base Int Diag
libSMP ONBOARD i
libSSP ONBOARD i sspSes
libPHY ONBOARD i
libGUI ONBOARD i
Build Version Stamp:
//depot/vscFwKit/Releases/SAS/Rev03.04 : 328 (Release Build)
--> _
Connected 1:13:13 Auto detect 9600 8-N-1 SCROLL CAPS NUM Capture Print echo
Start 9600 - HyperTerminal Adaptec Storage Manager public on 192.168.1.10 untitled - Paint 2:23 PM